Less (CloudHad)

- What is {Less}?

- Why {Less}?

- Implementation of {Less} in websites.

- Overview of the syntax with examples.

What is {Less}?

- Dynamic style sheet language designed by Alexis Sellier from

- Open source

- Less can run client-side (IE8+, WebKit, Firefox).

- Less can run server-side (Node.js).

- Less can be pre-compiled into CSS.

- First version of was written in Ruby but this was replaced by a JavaScript version.

Advantages {Less}

- Save time

- Reduce mistakes

- Reduce repetition

- It makes logical sense to break out CSS into multiple files

- More Readability

Disadvantages {Less}

- Not controlled by W3C standards.

- Limited best practice available.

- If not used carefully, you could end up with less CSS and more complexity!

Implementation of {Less} in websites.

Client Side

- Include your less file (*.less) in <head> tag
  - Download *less.js from http://lesscss.org*
  - Include *less.js after your less file <head>*
  Make sure you include style sheets *before the script*

  ```
  <link rel="stylesheet/less" type="text/css" href="styles.less">
  <script src="less.js" type="text/javascript"></script>
  ```

Server Side

- Installation node.js cmd
  $ npm install –g less
  - Command line
  Compile less as plain CSS
  $ lessc style.less > style.css

This command will output the simple plain CSS

Less CSS compilers

Respectively all major editors can be used for writing {Less}

- Free compiler for mac –

    http://incident57.com/less

- Free compiler for mac, pc, Linux –

    http://wearekiss.com/simpless
    http://winless.org/online-less-compiler
    WinLess
    Crunch!
    Mixture
    Adobe Dream Weaver
    Notepad++
    Sublime Text 2
    Kineticwing IDE
    Coda
    Geany

Syntax with examples.

-LESS has everything that CSS is missing. {Less} allows the dynamic editability options for

dynamic stylesheet with help of these

- Variables
- Mixins
- Cascading + Nesting
- &combinator
- Operations
- Comments
- @import
- String interpolation
- Escaping
- Namespaces
- Scope
- Extend
- Loops

Variables

- Start with @ symbol

- Can storehexadecimalcolors, e.g. #333 or #fefefe

- Can store strings, e.g. "Webucator, Inc."

- Can store sizes, e.g. 10px

LESS Syntax	CSS Output

`// Declare a numeric variable`
`@red: #ff0000;`
`// Declare a string variable`
`@path: "/sites/default/files/images";`
`// Apply these variables`
`.block {`
` color: @red;`
` background:url('@{path}/mypic.jpg');`
`}`
	`.block {`
	`  color: #ff0000;`
	`  background: url('/sites/default/`
	`files/images/mypic.jpg');`
	`}`

Mixins

- Include properties from one ruleset to another
- Reuse code
- Can accept parameters
- Can define default value for parameters
- @arguments is a special variable that contains the ordered value stored in all parameters

LESS Syntax	CSS Output

.border-radius(@radius: 2px) {
  -webkit-border-radius: @radius;
-moz-border-radius: @radius;
border-radius: @radius;
}
@gray: #333;
header > nav {
  border:1px solid @gray;
  .border-radius;
}
aside > nav {
  .border-radius(5px);
}
	header > nav {
	  border:1px solid #333;
	  -webkit-border-radius: 2px;
	-moz-border-radius: 2px;
	border-radius: 2px;
	}
	aside > nav {
	  -webkit-border-radius: 5px;
	-moz-border-radius: 5px;
	border-radius: 5px;
	}

Cascading + Nesting

- Nest rulesets in place of cascading
- Can be used in combination with traditional cascading approach
- Mimics your DOM structure
- Outputs to cascading rulesets

LESS Syntax	LESS Nesting

<pre>header {
  color: white;
}
header .logo {
  width:300px;
  float:left;
}
header > #searchcontainer {
  width:300px;
  float:right;
}
header > #searchcontainer input {
  width:250px;
  margin-right:6px;
  color:@darkGray;
}
header > #searchcontainer input:focus {
  color:@lightGray;
}</pre>
	<pre>header {
	  color: white;
	  .logo {
	    width:300px;
	    float:left;
	  }
	  #searchcontainer {
	    width:300px;
	    float:right;
	    input {
	      width:250px;
	      margin-right:6px;
	      color:@darkGray;
	      &:focus {
	        color:@lightGray;
	      }
	    }
	  }
	}</pre>

Operations

- which let you create CSS properties mathematically.

- Any number, color or variable can be operated upon

- Math functions

- Math operators (+, -, *, /)

- Color functions

LESS Syntax	CSS Output

@padding: 2px;
figure {
 padding:@padding;
 img {
  padding:@padding * 2;
 }
 figcaption {
  padding:@padding + 4px;
 }
}
	figure {
	padding:2px;
	}
	figure img {
	padding:4px;
	}
	figure figcaption {
	padding: 6px;
	}

@import

- @import will compile and copy result into single file
- All variables and mixins are available to main file or files imported after declarations
- Order matters
- Can include/ignore .less extension
- Can import "classic" css using .css extension
- You can break out files logically, but avoid the (terrible) @import() statement in traditional CSS

LESS @IMPORT Syntax

```less
// import normalize for CSS resets
@import "normalize";
// same as @import "normalize.less";

// import mixins
@import "mixins";

// base for mobile devices
@import "base";

//tables and small laptops
@media only screen and (min-width: 768px) {
@import "768up";
}
//desktop
@media only screen and (min-width: 1030px) {
@import "1030up";
}
```
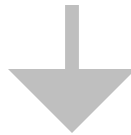
String Interpolation

- Use @{name} construct
- For embedding variable values within declarations

```
@baseUrl: "http://www.webucator.com/";
@imageUri: "images/";
background-image: url('@{baseUrl}@{imageUri}bg.png');
```

↓

```
background-image: url('http://www.webucator.com/images/bg.png');
```

Extend

- Extend is a Less pseudo-class which merges the selector it is put on with ones that match what it references.

LESS Syntax	CSS Output

nav ul {
  &:extend(.inline);
  background: blue;
}
 	
.inline {
  color: red;
}
	nav ul {
	  background: blue;
	}
	
	.inline,
	nav ul {
	  color: red;
	}

References

- http://lesscss.org/features/

- http://css-tricks.com/snippets/javascript/lighten-darken-color/

- https://stackoverflow.com/questions/21821947/calculate-difference-between-color-hexadecimal/21831435#21831435

- https://github.com/less/less.js/archive/master.zip

- http://www.lesscss.org

- http://leafo.net/lessphp

- https://github.com/cloudhead

- http://en.wikipedia.org/wiki/LESS_(stylesheet_language)

- http://coding.smashingmagazine.com/2011/09/09/an-introduction-to-less-and-comparison-to-sass

Thank You ☺️